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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/733,735 | 12/11/2003 | Marius Ghercioiu | 5150-80501 | 5641 |

7590 11/28/2008

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| EXAMINER | |
|---|---|
| AUGUSTINE, NICHOLAS | |
| ART UNIT | PAPER NUMBER |
| 2179 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/733,735 | GHERCIOIU ET AL. | |
| | Examiner | Art Unit | |
| | NICHOLAS AUGUSTINE | 2179 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *05 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,4,6 and 8-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,6 and 8-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

A. This action is in response to the following communications: Notice of Appeal filed: 08/05/2008. This action is made Non-Final. Prosecution is Re-Opened.

B. Claims 1,4, 6 and 8-30 remain pending.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,4,6 and 8-30 are rejected under 35 U.S.C. 103(a) as being obvious over Kodosky (US 6,173,438), herein referred to as "Kodosky" in view of Lynggaard (US 2003/0014615), herein referred to as "Lynggaard".

As for independent claims 1 and 28, Kodosky teaches a computer-implemented method and corresponding medium for programming an embedded device, the method comprising, creating a graphical program, wherein the graphical program specifies a function to be performed by the embedded device; storing the graphical program on a mobile computer; and transmitting the graphical program from the mobile computer to the embedded device over a serial link; wherein after said transmitting, the embedded

device is operable to execute the graphical program to perform the specified function (figure 6-9 and col.14, lines 58-67 and col.16, lines 45, 47, 53-55). Kodosky does not specifically teach DAQ card having sensors. It is commonly known in the art that DAQ cards for data acquisition to have sensors thereon, therefor it would have been obvious to one of ordinary skill in the art to presume the DAQ card of Kodosky to have sensors (http://en.wikipedia.org/wiki/Data_acquisition).

Kodosky does not specifically teach a use of a personal digital assistant (PDA) nor an embedded sensor device that includes one or more sensors. However in the same field of endeavor Lynggaard teaches wherein the embedded sensor device comprises one or more sensors, and wherein the embedded sensor device does not include a display; wherein the embedded sensor device is operable to execute the graphical program to perform the specified function (par. 12, 59, 61).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lynggaard into Kodosky, because Lynggaard solves the problem of controlling a unit provided with a processor and to a device a computer program product and product kit for the same purpose (par.3). The combination of Lynggaard into Kodosky yields the end result of Kodosky's system being obvious to take in the form of mobile computing with interaction of sensory device(s).

As for dependent claim 4, Kodosky teaches the method of claim 2. Kodosky does not specifically mention wherein the sensor interface comprises a compact sensor interface between approximately 3 cm.times.3 cm and approximately 6 cm.times.6 cm. Kodosky does not exactly mention a size. However it would have been obvious to one of ordinary skill in the art to achieve any desired size of a compact sensor interface (col.23, lines 16-22).

As for dependent claim 6, Kodosky teaches the method of claim 1. Kodosky does not expressly mention wherein said creating the graphical program is performed on the mobile computer. Kodosky mentions working on a computer but does not expressly mention it being a mobile computer; it would have been obvious to one of ordinary skill in the art at the time of the invention to realize the portability to any computing environment (col.7-8 and col.23, lines 16-22).

As for dependent claim 8,Kodosky teaches the method of claim 1, wherein the serial link comprises a serial cable (col.8, line 4).

As for dependent claim 9, Kodosky teaches the method of claim 1. Kodosky does not expressly mention wherein the serial link comprises a wireless serial link; however it would have been obvious at the time of the invention to implement common practice serial implantations such as wireless, 802.11a,b, g, n, infrared serial link etc. (col.23,

lines 16-23 and col.8, lines 1-15).

As for dependent claim 10, Kodosky teaches the method of claim 9, wherein the wireless serial link comprises an infrared serial link (note the analysis of claim 9).

As for dependent claim 11, Kodosky teaches the method of claim 10, wherein the infrared serial link comprises a short-range infrared serial link (note the analysis of claim 9).

As for dependent claim 12, Kodosky teaches the method of claim 9, wherein the wireless serial link comprises a short-range wireless serial link or an 802.11 serial link (note the analysis of claim 9).

As for dependent claim 13, Kodosky teaches the method of claim 1, further comprising, analyzing the graphical program for function dependencies to generate required modules; analyzing the graphical program to determine an execution sequence; and generating a flatfile based on the required modules and execution sequence, wherein the flatfile contains the functionality of the graphical program (figure 6).

As for dependent claim 14, Kodosky teaches the method of claim 13, wherein said transmitting the graphical program from the mobile computer to the embedded device over a serial link comprises, transmitting the flatfile to the embedded device over the

serial link (note the analysis of claim 9 and figure 7). Kodosky does not specifically mention the use of a flatfile, however in the same field of endeavor Lynggaard does (par.104). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lynggaard into Kodosky, because Lynggaard solves the problem of controlling a unit provided with a processor and to a device a computer program product and product kit for the same purpose (par.3). The combination of Lynggaard into Kodosky yields the end result of Kodosky's system being obvious to take in the form of mobile computing with interaction of sensory device(s).

As for dependent claim 15, Kodosky teaches the method of claim 14, further comprising, the embedded device processing the flatfile to generate an executable, wherein, in the embedded device being operable to execute the graphical program to perform the specified function, the embedded device is operable to execute the executable to perform the specified function (figure 11; note the analysis of claim 14)

As for dependent claim 16, Kodosky teaches the method of claim 1, further comprising, the embedded device executing the graphical program to perform the function (figure 11).

As for dependent claim 17, Kodosky teaches the method of claim 16, wherein the

embedded device executing the graphical program generates data, the method further comprising, the embedded device sending the data to the mobile computer; and the mobile computer displaying the data (note the analysis of claim 6).

As for dependent claim 18, Kodosky teaches the method of claim 17, wherein the embedded device sending the data to the mobile computer; and the mobile computer displaying the data are performed using a Front Panel Protocol (figure 9).

As for dependent claim 19, Kodosky teaches the method of claim 17, wherein said sending the data to the mobile computer comprises sending the data to the mobile computer over a serial cable (note the analysis of claim 8).

As for dependent claim 20, Kodosky teaches the method of claim 17, wherein sending the data to the mobile computer comprises sending the data to the mobile computer over a wireless serial link (note the analysis of claim 9).

As for dependent claim 21, Kodosky teaches the method of claim 20, wherein the wireless serial link comprises a short-range infrared serial link (note the analysis of claim 9).

As for dependent claim 22, Kodosky teaches the method of claim 10, wherein the infrared serial link comprises an IrDA serial link (note the analysis of claim 9).

As for dependent claim 23, Kodosky teaches the method of claim 9, wherein the wireless serial link comprises a short-ranged wireless serial link or an 802.11 serial link (note the analysis of claim 9).

As for dependent claim 24, Kodosky teaches the method of claim 16, wherein the embedded device executing the graphical program generates data, the method further comprising, executing a different graphical program on the mobile computer, wherein said executing the different graphical program comprises, performing a discovery operation to detect and establish communications with the embedded device; retrieving the data from the embedded device via a wireless serial transmission medium; and displaying the data on the mobile computer (note the analysis of claim 1-23 above).

As for dependent claim 25, Kodosky teaches the method of claim 24, wherein the wireless serial transmission medium comprises an infrared serial link (note the analysis of claim 9).

As for dependent claim 26, Kodosky teaches the method of claim 10, wherein the infrared serial link comprises a short-range infrared n IrDA serial link (note the analysis of claim 9).

As for dependent claim 27, Kodosky teaches the method of claim 9, wherein the

wireless serial link comprises a short-ranged wireless serial link or an 802.11 serial link (note the analysis of claim 9).

As for independent claim 29, Kodosky teaches a system for programming an embedded device, the system comprising, a mobile computer system, comprising, a processor; a memory medium coupled to the processor, wherein the memory medium stores the program and a plurality of components of a program execution system, wherein the memory medium also stores program instructions executable to analyze the program to determine a subset of the plurality of components required for execution of the program; and a display coupled to the processor and memory medium; and an embedded device coupled to the computer system via a serial transmission medium, wherein the embedded device comprises, a processor; and a memory medium coupled to the processor, wherein the memory medium stores a minimal execution system; wherein the memory medium of the mobile computer system further stores program instructions which are executable by the processor of the computer system to, transmit the program and the subset of the plurality of components to the embedded device over the serial transmission medium (note the analysis of claim 2); wherein the minimal execution system is executable by the processor of the embedded device to execute the program using the subset of the plurality of components; and wherein the mobile computer is operable to receive data from the embedded device and display the data on the display (note the analysis of claims 1-28 above). Kodosky does not specifically teach a use of a personal digital assistant (PDA) nor an embedded sensor device that includes one or

more sensors. However in the same field of endeavor Lynggaard teaches wherein the embedded sensor device comprises one or more sensors, and wherein the embedded sensor device does not include a display; wherein the embedded sensor device is operable to execute the graphical program to perform the specified function (par. 12, 59, 61). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lynggaard into Kodosky, because Lynggaard solves the problem of controlling a unit provided with a processor and to a device a computer program product and product kit for the same purpose (par.3). The combination of Lynggaard into Kodosky yields the end result of Kodosky's system being obvious to take in the form of mobile computing with interaction of sensory device(s).

As for independent claim 30, Kodosky teaches a hand-held computer, comprising: a processor; a memory medium coupled to the processor, wherein the memory medium stores a graphical program, wherein the graphical program specifies a function to be performed by a sensor interface device; and a display coupled to the processor and memory medium; wherein the memory medium further stores program instructions which are executable by the processor to: analyze the graphical program; convert the graphical program into a format suitable for transmission over a serial link to the sensor interface device (note the analysis of claim 2 above); and transmit the converted graphical program from the hand-held computer to the sensor interface device over the serial link; wherein after said transmitting, the sensor interface device is operable to

execute the converted graphical program to perform the specified function; and wherein the memory medium further stores program instructions which are executable by the processor to: receive data from sensor interface device during execution of the converted graphical program; and display the received data on the display (not the analysis of claims 1-28 above). Kodosky does not specifically teach a use of a personal digital assistant (PDA) nor an embedded sensor device that includes one or more sensors. However in the same field of endeavor Lynggaard teaches wherein the embedded sensor device comprises one or more sensors, and wherein the embedded sensor device does not include a display; wherein the embedded sensor device is operable to execute the graphical program to perform the specified function (par. 12, 59, 61). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lynggaard into Kodosky, because Lynggaard solves the problem of controlling a unit provided with a processor and to a device a computer program product and product kit for the same purpose (par.3). The combination of Lynggaard into Kodosky yields the end result of Kodosky's system being obvious to take in the form of mobile computing with interaction of sensory device(s).

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3. Claims 1, 28-30 are rejected under 35 U.S.C. 103(a) as being obvious over Kodosky (US 6,173,438), herein referred to as "Kodosky" in view of Fujiwara (US 2003/0014615), herein referred to as "Fujiwara".

As for independent claims 1 and 28, Kodosky teaches a computer-implemented method and corresponding medium for programming an embedded device, the method comprising, creating a graphical program, wherein the graphical program specifies a function to be performed by the embedded device; storing the graphical program on a mobile computer; and transmitting the graphical program from the mobile computer to the embedded device over a serial link; wherein after said transmitting, the embedded device is operable to execute the graphical program to perform the specified function (figure 6-9 and col.14, lines 58-67 and col.16, lines 45, 47, 53-55). Kodosky does not specifically teach DAQ card having sensors. It is commonly known in the art that DAQ cards for data acquisition to have sensors thereon, therefor it would have been obvious to one of ordinary skill in the art to presume the DAQ card of Kodosky to have sensors (http://en.wikipedia.org/wiki/Data_acquisition). Kodosky does not specifically teach a use of a personal digital assistant (PDA) nor an embedded sensor device that includes one or more sensors. However in the same field of endeavor Fujiwara teaches wherein the embedded sensor device comprises one or more sensors, and wherein the embedded sensor device does not include a display; wherein the embedded sensor device is operable to execute the graphical program to perform the specified function (figure 4; col.5,lines 45-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lynggaard into Kodosky, because Lynggaard solves the problem of performing desired functions to specific areas of computing (col.1, lines 27-33). The combination of Fujiwara into Kodosky yields the end result of

Kodosky's system being obvious to take in the form of mobile computing with interaction of sensory device(s) connected thereon.

As for independent claim 29, Kodosky teaches a system for programming an embedded device, the system comprising, a mobile computer system, comprising, a processor; a memory medium coupled to the processor, wherein the memory medium stores the program and a plurality of components of a program execution system, wherein the memory medium also stores program instructions executable to analyze the program to determine a subset of the plurality of components required for execution of the program; and a display coupled to the processor and memory medium; and an embedded device coupled to the computer system via a serial transmission medium, wherein the embedded device comprises, a processor; and a memory medium coupled to the processor, wherein the memory medium stores a minimal execution system; wherein the memory medium of the mobile computer system further stores program instructions which are executable by the processor of the computer system to, transmit the program and the subset of the plurality of components to the embedded device over the serial transmission medium (note the analysis of claim 2); wherein the minimal execution system is executable by the processor of the embedded device to execute the program using the subset of the plurality of components; and wherein the mobile computer is operable to receive data from the embedded device and display the data on the display (note the analysis of claims 1-28 above). Kodosky does not specifically teach a use of a personal digital assistant (PDA) nor an embedded sensor device that includes one or more sensors. However in the same field of endeavor Fujiwara teaches wherein the

embedded sensor device comprises one or more sensors, and wherein the embedded sensor device does not include a display; wherein the embedded sensor device is operable to execute the graphical program to perform the specified function (figure 4; col.5,lines 45-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lynggaard into Kodosky, because Lynggaard solves the problem of performing desired functions to specific areas of computing (col.1, lines 27-33). The combination of Fujiwara into Kodosky yields the end result of Kodosky's system being obvious to take in the form of mobile computing with interaction of sensory device(s) connected thereon.

As for independent claim 30, Kodosky teaches a hand-held computer, comprising: a processor; a memory medium coupled to the processor, wherein the memory medium stores a graphical program, wherein the graphical program specifies a function to be performed by a sensor interface device; and a display coupled to the processor and memory medium; wherein the memory medium further stores program instructions which are executable by the processor to: analyze the graphical program; convert the graphical program into a format suitable for transmission over a serial link to the sensor interface device (note the analysis of claim 2 above); and transmit the converted graphical program from the hand-held computer to the sensor interface device over the serial link; wherein after said transmitting, the sensor interface device is operable to

execute the converted graphical program to perform the specified function; and wherein the memory medium further stores program instructions which are executable by the processor to: receive data from sensor interface device during execution of the converted graphical program; and display the received data on the display (not the analysis of claims 1-28 above). Kodosky does not specifically teach a use of a personal digital assistant (PDA) nor an embedded sensor device that includes one or more sensors. However in the same field of endeavor Fujiwara teaches wherein the embedded sensor device comprises one or more sensors, and wherein the embedded sensor device does not include a display; wherein the embedded sensor device is operable to execute the graphical program to perform the specified function (figure 4; col.5,lines 45-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lynggaard into Kodosky, because Lynggaard solves the problem of performing desired functions to specific areas of computing (col.1, lines 27-33). The combination of Fujiwara into Kodosky yields the end result of Kodosky's system being obvious to take in the form of mobile computing with interaction of sensory device(s) connected thereon.

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**(Note:)** **It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006,1009, 158 USPQ 275, 277 (CCPA 1968)).**

## *Response to Arguments*

Applicant's arguments with respect to claims 1,4,6 and 8-30 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

***Inquires***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Augustine whose telephone number is 571-270-1056. The examiner can normally be reached on Monday - Friday: 7:30- 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nicholas Augustine/
Examiner
Art Unit 2179
November 21, 2008

/Ba Huynh/
Primary Examiner, Art Unit 2179